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## RESEARCH

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# Who Is the Headfirst Plaintiff? Critical Findings From Court Decisions for Aquatic Specialists

**Annie Clement and Kadence Alexa Otto**

**Key Words:** aquatic facility design, aquatic legal issues, aquatic risk management, adult swimming, diving

Aquatic specialists monitor published drowning and spinal-cord injury reports annually and integrate the information into their teaching, lifeguarding protocols, and planning. Aquatic professionals should be aware that the National Electronic Injury Surveillance System (NEISS) estimated that approximately 150,553 people sustained injuries in swimming pools in 2005 (Consumer Product Safety Review, summer 2006, p. 3). Furthermore, the National Safety Council (2006) found drowning to be the “second leading cause of injury death for children and adolescents ages 2–4, 6–7, 9 and 11–16” (p. 14). The council also reported 3,447 deaths from drowning in 2005; 80% were males, 20% were females.

With the onslaught of today’s media, the filing of cases and the decisions of the courts are having a substantial impact on aquatics and on sport in general. For example, the removal of diving boards, purported to be in response to litigation, is but one of these issues. There is only one published study, however, that analyzed court decisions regarding this serious aspect of aquatics. Gabrielsen and Spivey (1990) analyzed the decisions of the courts, as well as incidents that were the subject of potential litigation.

In this study we investigated published courts of appeals’ decisions involving headfirst entry into water as a sport or recreational pursuit (1990–2000). We identified individuals who became paraplegic or quadriplegic, were severely injured, or perished as a result of moving headfirst into known or unknown waters, as well as the activities that led to their individual incidents. We also identified successful and unsuccessful plaintiffs in a court of law. We then tried to compare demographics with the facts ascertained from the court decisions. Results of this research will enhance existing efforts to make the aquatic environment safe, will acquaint aquatic managers with an understanding of the results of litigation, and will provide the aquatic community with the knowledge of headfirst water-entry litigation.

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## Review of Literature

Research studies were limited to those conducted over the past 30 years in the United States. The following are separated into two subheadings, court-decision research and demographic research.

### Court-Decision Research

Gabrielsen and Spivey (1990) analyzed data from diving incidents over which litigation was either in progress or had been completed. Of 486 cases, 74% happened in swimming pools and 26% occurred in the natural environment. All but seven of the victims sustained spinal-cord injuries. Eighty-four percent were male, and 16% were female.

Over 50% of the pools were residential, about 20% were in hotels or motels, and 15% were in apartments or condominiums (Gabrielsen & Spivey, 1990). Forty-one percent of the cases were found in six states: Illinois (36), Florida (27), Pennsylvania (24), California (21), Massachusetts (20), and Michigan (20; Gabrielsen & Spivey).

One hundred ninety-four injuries occurred after dives from decks and adjacent structures into in-ground pools. Forty-six percent of the dives were into shallow water. "Twenty-six of the injuries occurred in an above ground pool of three and one-half feet of water" (Gabrielsen & Spivey, 1990, p. 1). A number of these dives were from starting blocks and slides into the shallow end of the pool.

Gregory S. Munro's unpublished work (at The University of Montana School of Law) examined 52 cases from state and federal courts during the last half of the 20th century. He found that "plaintiff's obtained judgments in somewhere between 25 and 42% of the cases reaching appeal" (Bogus, 2004, p. 18). Bogus, in discussing litigation involving diving boards, noted that these numbers might be a small fraction of the total, because about 95% of civil cases are resolved before trial.

### Demographic Research

Young, Burns, Bowen, and McCutchen (1982) found that of 564 diving injuries, nearly two thirds (63%) were in the 15- to 29-year age group and 11% occurred in those between 30 and 44 years of age. "Ninety-one percent were male; 9% were female. Approximately half occurred in rivers, lakes, and the ocean" (p. 26).

Results such as these have provided researchers with baseline data specific to age and sex of the victims and the locations in which the incidents occurred. Based on the findings of the aforementioned researchers, most of the victims were males between the ages of 15 and 29 who were diving into open bodies of water.

Present (1989) analyzed reports of 83,000 headfirst pool-entry injuries treated in hospital emergency rooms participating in the NEISS database between May 1 and September 30, 1988. Of these victims ( $n = 28,500$ ), 55% made contact with the bottom or sides of the pool, 13% hit a diving board, and 9% hit a person or object before or after contact with the water. Fifty percent of the incidents occurred in home pools, 37% in public pools, and 12% in apartment complexes. In-ground pools accounted for 85% of the incidents, with above-ground pools accounting for 15%. Males sustained approximately two thirds of the injuries (Present).

Bailes, Herman, Quigley, Cerullo, and Meyer (1990) investigated factors at work in patients ( $n = 2,435$ ) with spinal-cord injuries from 1975 to 1986. Nine percent had been injured while diving, and 55% of the diving incidents occurred in a lake. Alcohol use was documented in 44% of these cases. Using Albrand and Walter's (1975) research, Bailes et al. calculated the depth of water necessary to sustain a dive (allowing for the complete deceleration of the body) to be nearly double the person's height. They concluded that "above ground shallow swimming pools are notoriously dangerous for diving" (p. 158).

Half of the 196 people involved in diving accidents interviewed by DeVivo and Sekar (1997) said that they dove into less than 1 m (4 ft) of water; another 38% dove into 1–3 m (4–8 ft) of water. Nearly half stated that the injury occurred on their first visit to the site.

## Method

We analyzed courts of appeals' decisions ( $n = 209$ ) obtained from Lexis-Nexis Universe federal- and state-law databases. We included only cases that involved victims who sustained head injuries while moving headfirst into a body of water for sport or recreational purposes.

We conducted a content analysis using eight reoccurring factors uncovered in the court decisions. Content analysis, often used in social-science research, is unobtrusive and does not alter the subject (in this case, the record of the court's decision; Babbie, 1995). We identified the cases by state, case name, year of decision, age of injured party, sex of injured party, type of injury or death, location or type of water entry, behavior of participant, environment in which incident occurred, type of claim, and outcome of case.

After examining the data we found that an exact age was not available for nearly half of the cases; therefore, victims were coded as either adult or minor (18 years of age or less). Type of injury revealed three distinct categories: died, paraplegic/quadriplegic, or severely injured (the word *died*, *paraplegic*, or *quadriplegic* must have appeared in the description of the case for it to be considered under the terms *died* or *paraplegic/quadriplegic*). The phrase *severely injured* was used in many cases. If the words *died*, *paraplegic*, or *quadriplegic* were not used we coded the case as severely injured.

Location or type of water entry resulted in 11 categories: above-ground pool, board dive, boat, bridge/ledge, in-ground pool, other, pier/dock, racing start, run and plunge into open water, swing, and water slide, and other, which included dives from a roof, lifeguard chair, and a wooden plank nailed to a tree. Participant behavior documented evidence of horseplay, intentional entry into shallow water, alcohol consumption, or a traditional headfirst entry into water (American Red Cross, 2002).

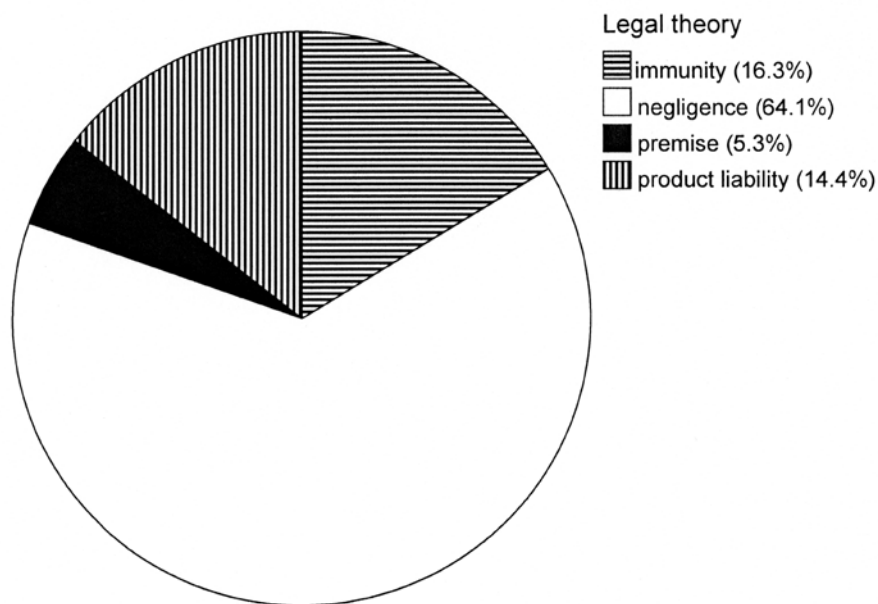
Plaintiff claims included negligence (person-to-person acts), premise liability (negligence by private- or public-property owners), and product liability (suits against manufacturers or businesses responsible for the design, manufacture, or sale of the product). We also included the defense of immunity (governmental privilege granted as a result of prior federal, state, or municipal law). These laws included recreational-user statutes and other statutes pertaining to the use of land. Only one category was assigned to each case.

Environment in which the incident occurred consisted of eight different categories: home, hotel/motel, lake, ocean, other, park/municipal, river, school, and other, which referred to a site whose ownership could not be identified or a site that was one of a kind (i.e., one incident occurred in a country club). Outcome of the case was coded as either for the plaintiff (the injured party who filed the suit) or for the defendant.

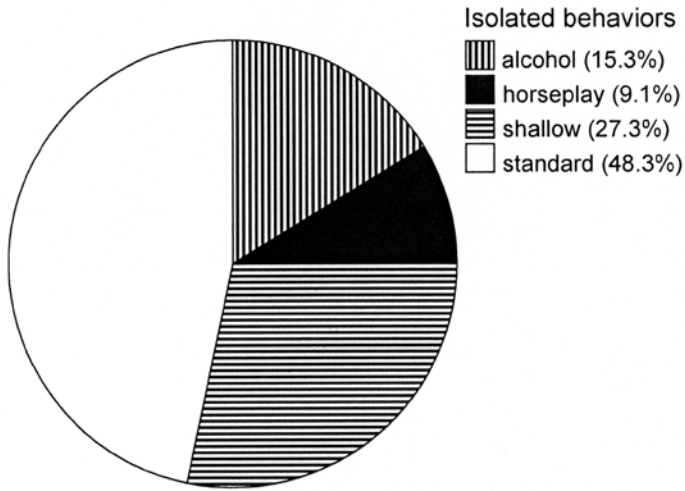
Once the content analysis was complete, we coded the data and ran descriptive statistics. Finally, we made comparative assessments by cross-tabulation.

## Results

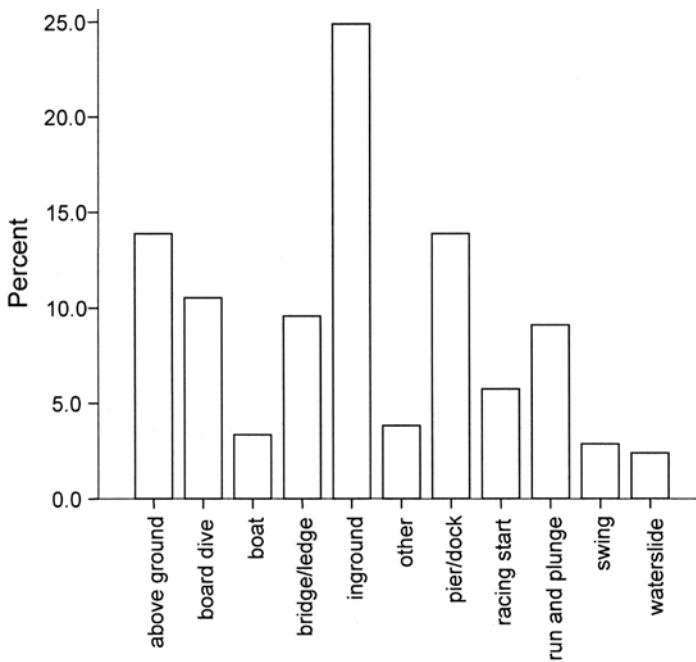
Forty-eight percent of the headfirst-incident court decisions were made in the states of New York (37), Illinois (17), Michigan (11), Ohio (14), Louisiana (12), and California (10). Of the 209 cases, 32% resulted in a finding for the plaintiff, and 68% for the defendant. The tort claim of negligence was found in 64% of the cases. Immunity, used as a defense in negligence claims, controlled in 16% of the cases. Product liability played a role in 14% of the cases, and premise liability, 5% (see Figure 1). Two thirds of the cases involved adults. Eighty-three percent of the victims were male. Five percent of the victims died, 47.5% became paraplegic or quadriplegic, and 47.5% were severely injured. Horseplay was documented in 9% of the cases; alcohol played a role in 15% (see Figure 2). Above-ground pool entry accounted for 14% of the injuries, and nearly 25% were injured entering in-ground pools. Bridges and ledges were involved in 9.6%, 14% were dives from piers and docks, and 15% were from racing starts or run-and-plunge entries (see Figure 3).



**Figure 1** — Legal theory.



**Figure 2** — Isolated behaviors.



**Figure 3** — Location or type of water entry.

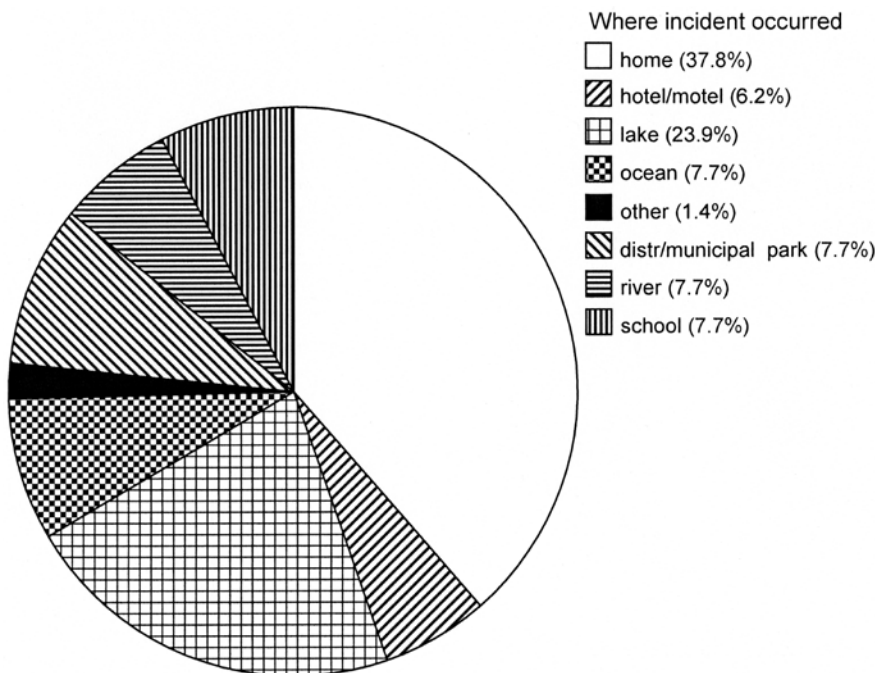
Thirty-eight percent of the incidents occurred in home pools, 24% occurred in lakes, 7.7% occurred in park districts and municipal agencies, and hotels and motels accounted for just over 6% (see Figure 4).

### Adults Versus Minors

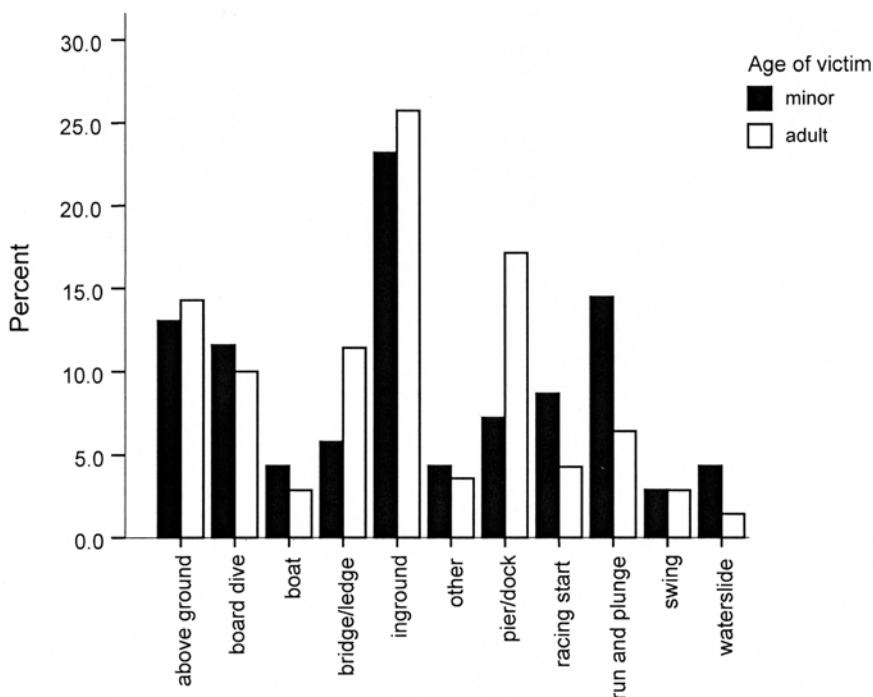
Although minors were involved in just one third of the cases, they sustained a greater percentage of injuries from racing starts (8.7%, vs. 4.3% for adults) run and plunge (14.5%, vs. 6.4% for adults), and waterslide (4.3%, vs. 1.4% for adults) incidents. The ratio of adults to minors in regard to diving incidents from bridges and ledges was nearly 2:1 (see Figure 5). Moreover, minors sustained a higher percentage of injury in the ocean (13–5%), park districts (14.5–4.3%), and schools (14.5–4.3%) than did adults. Adults' rates of injury were higher than those of minors in hotels and motels (8.6–1.4%) and in lakes (28–16%; see Figure 6).

### Men Versus Women

No women were involved in headfirst incidents from a boat or bridge/ledge. Above-ground-pool entries accounted for 23% of the injuries for females and 12% in males. Females sustained higher injury rates than men in incidents involving in-ground pools (37% and 22.4%, respectively) and diving boards (14% and 10%,



**Figure 4** — Environment in which incident occurred.



**Figure 5** — Adult vs. minor: location or type of water entry.

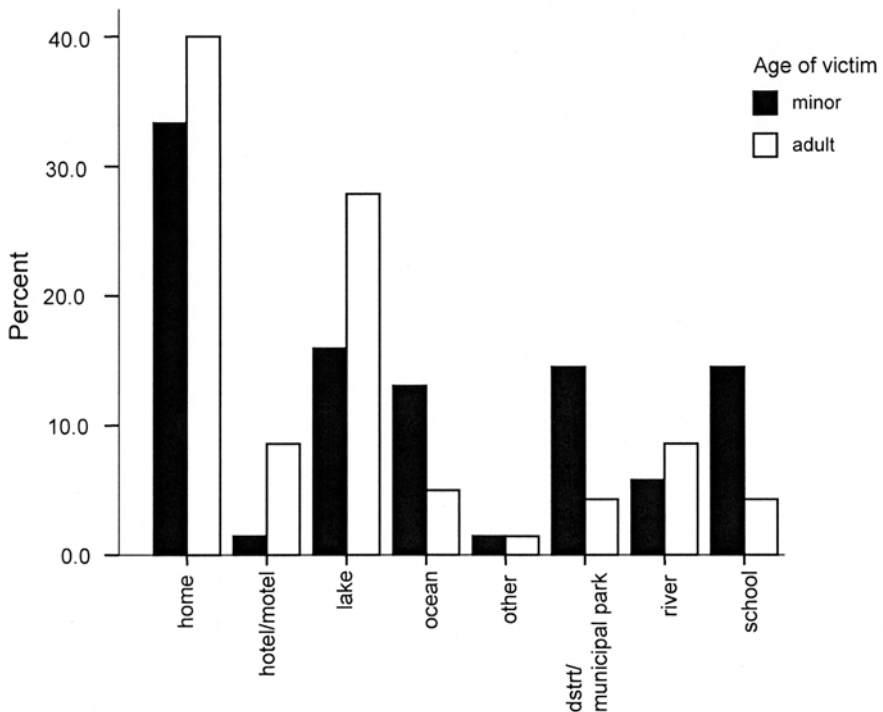
respectively; see Figure 7). No incidents of injury were found for females in an ocean or river. Females were injured far more often in municipal park districts than males were (23–4.6%). They were also more prone to injury in hotels and motels than males (14% and 4.6%, respectively). The occurrence of paraplegia or quadriplegia among females was just under half that found among males (29–51%). Women were found, however, to sustain a higher percentage of severe injuries than did males (66–44%). Women dove into shallow water at a much higher rate than that found for men (49–23%).

## Discussion

Six states—New York, Illinois, Michigan, Ohio, Louisiana, and California—accounted for nearly half of the cases examined. Gabrielsen and Spivey (1990) listed Illinois, Florida, Pennsylvania, California, Massachusetts, and Michigan in descending order. Illinois, Michigan, and California appear on both lists. Similar to Bogus's (2004) findings of 25%, aquatic professionals should take note that, in this study, 32% of the injured parties were successful in a court of law.

The male-to-female ratio of injury (83% male, 17% female) was identical to Gabrielsen and Spivey's results. Alcohol was cited as having played a role in just



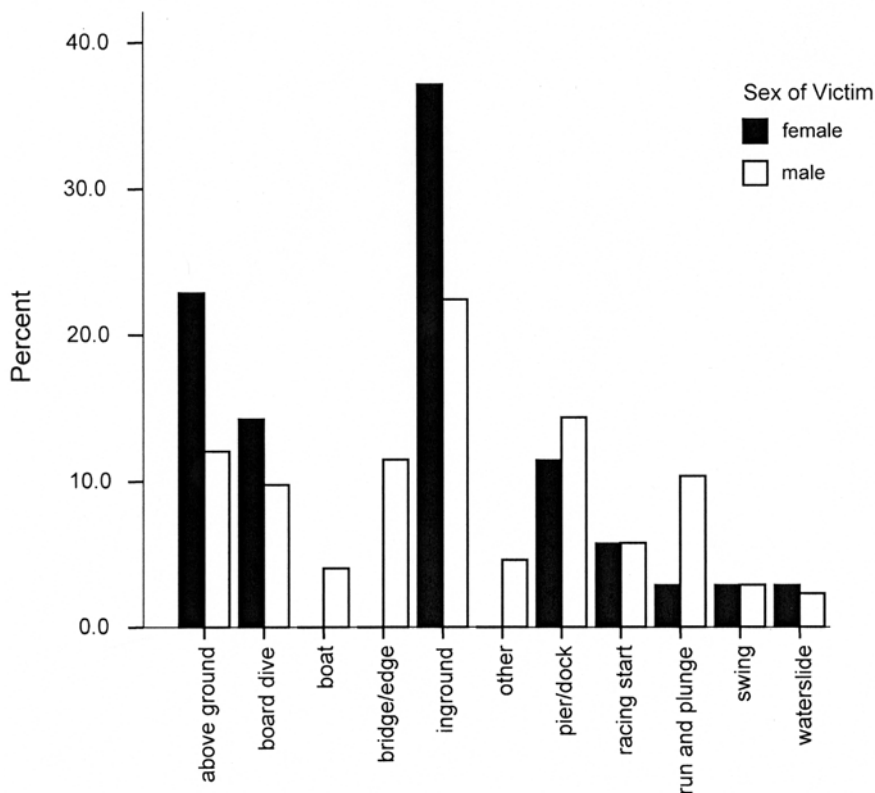


**Figure 6** — Adult vs. minor: environment in which incident occurred.

15% of the cases in this study, far less than the 46% reported by Gabrielsen and Spivey and the 44% reported by Bailes et al. (1990). Researchers speculate that subjects in this study may have been less inclined to sue if they were intoxicated at the time of the accident or otherwise might have tended to settle before trial. It should be noted that Gabrielsen and Spivey's study included not just the final decisions of the court but also cases in progress (which might have resulted in settlements). Furthermore, Bailes et al.'s research focused solely on the injuries themselves, with no effect coming from a lawsuit or court decision.

In this study, above-ground entry into water and board-dive percentages combined (24.5%) closely paralleled Present's (1989) and Gabrielsen and Spivey's (1990) findings (26%). Thirty-eight percent of the injured participants sustained their injuries in a home or residential environment; this figure was lower than the findings of other researchers (Gabrielsen & Spivey; Present; 55% and 50%, respectively). Hypothetically, many of the injuries sustained in the home might have involved family members; consequently, the injured party would have been less likely to file a lawsuit. In addition, because this is the most current study it might be that, over time, residential pool owners have become more safety conscious.

Among the cases, we found a few of particular interest, specifically, those involving immunity, shallow water, and quadriplegia.



**Figure 7** — Male vs. female: location or type of water entry.

## Immunity

In *Fryman v. United States of America*, the Flood Control Act of 1928 was explained as the creation of a system of dams authorized by Congress to control floods, first in Mississippi and later across the country. To convince people to accept the Flood Control Act, Congress provided that, “no liability of any kind shall attach to or rest upon the United States for any damage from or by floods or flood water at any place” (p. 79). Thus, immunity was provided for all forms of liability to anyone who owned land under the Flood Control Act even though no flood existed.

Dennis Fryman and his brother Terry went swimming in Lake Shelbyville in Illinois (*Fryman v. United States of America*, 1990). The lake was created under the flood-control project. Dennis attempted a shallow, racing dive into the water and made contact with a submerged island. He broke his neck and became paralyzed. His suit stated that warnings should have been posted about the condition of the lake. The district court dismissed the suit under the Flood Control Act of 1928.

In his appeal Fryman stated that water had nothing to do with the injury. His injury was related to the bottom of the lake, not the water in the lake. The trial

court and court of appeals found for the defendant; the Flood Control Act of 1928 controlled.

## Shallow Water

Females were found in greater numbers than males to be diving into shallow water in above-ground pools (*Barham v. Knickrehm*, 1996) and the shallow ends of in-ground pools (*Acierno v. Trailside Townhome Association, Inc., et al.*, 1994; *Battistoni et al. v. Weatherking Products, Inc., et al.*, 1994; *Trailside Townhome Association, Inc., et al. v. Acierno*, 1994).

Christina Barham, a 13-year-old, struck her head, fracturing her spine, and became a quadriplegic while entering a 1-m-deep (3.5-ft) above-ground residential swimming pool (*Barham v. Knickrehm*, 1996). She was attending a party hosted by the owner's son who had been told by his parents not to entertain in the pool when the parents were absent. Barham sued. The trial court dismissed the complaint for failure to state a cause of action for negligence. The Court of Appeals of Illinois, 3rd District, affirmed the decision of the trial court. "The Knickrehms owed no duty to Christina to protect her from the open and obvious dangers of their above ground swimming pool" (p. 1171).

Cindy Acierno, an owner of a townhouse in the Trailside community, sustained severe head and neck injuries when she dove from a kneeling position into the mid-point of the townhouse swimming pool and struck the bottom (*Acierno v. Trailside Townhome Association, Inc., et al.*, 1993; *Trailside Townhome Association, Inc., et al. v. Acierno*, 1994). She sued the homeowners' association and the company that serviced the pool for negligence in "failing to maintain the water level of the swimming pool at an appropriate level and for failing to install a divider rope to separate the shallow end of the pool from the deep end" (p. 1199). Acierno claimed that the negligence of the defendants caused her unknowingly to dive into water that was too shallow. The trial court found for the Trailside Townhome Association on summary judgment using premise-liability theory. The court of appeals reversed. The Supreme Court of Colorado agreed that the trial court's summary judgment should be reversed and made its decision on the theory of negligence. Plaintiff succeeded in the Supreme Court of Colorado.

Jana Battistoni was injured after diving into the shallow end of a residential pool (*Battistoni et al. v. Weatherking Products, Inc., et al.*, 1994). She sued, alleging that her injuries resulted from the defendant's failure to provide adequate depth markings and warnings of the danger of using the pool. The court, in finding for the defendant, noted that Jana Battistoni was a good swimmer, had been to the pool previous to the incident, and therefore the warning would not have been helpful.

## Quadriplegia

Craig, a navy veteran, ran and dove into 0.5 m (2 ft) of water and broke his neck, becoming a quadriplegic. He sued the owner of the property where the incident occurred (*Craig v. Lakeshore Marine, Inc., et al.*, 1997). The court granted summary judgment to the defendant; Craig appealed. The court, in finding for the defendant, attributed Craig's injuries to his failure to check the water bottom before diving and to his drinking alcohol. Alcohol was also a factor in the run-and-plunge dives of

Sperka (*Sperka v. Little Sabine Bay, Inc., et al.*, 1994) and Carr (*Carr v. San-Tan, Inc., et al.*, 1995). Both men, after drinking, ran into the water a short distance and dove, hitting the bottom or a sand bar, and became quadriplegics. The defendants won in both cases.

Run-and-plunge, shallow-water, ocean or lake headfirst injuries have occurred among skilled swimmers, as well as the general public. For example, Lupash, a 13-year-old boy, ran down the beach, entered the water, tripped, and fell in the ocean during the final event of a lifeguard competition. He said he had stepped into a hole and lost his balance. Lupash became a quadriplegic (*Lupash v. City of Seal Beach, et al.*, 1999). "An accomplished swimmer and a distance freestyler, Lupash had swum competitively since he was eight years old" (p. 1431). The young man had been warned in an earlier competition that he should be high stepping through the water to waist height and then use a dolphin dive (a lunge forward with arms and head straight up) until the water was deep enough to swim. Lupash brought suit against the city and others alleging that the junior-lifeguard instructional program failed to warn him to do bottom checks before diving and that spectators cajoled him into competing when he was tired and upset. The trial court entered a judgment of nonsuit. The court of appeals confirmed, stating that

despite risks, public entities do not owe a general duty of care to the public to provide safe beaches, to warn against concealed dangers caused by natural conditions of the ocean and there was no substantial evidence that defendant created an undue risk of harm to this plaintiff and his fellow competitors. (p. 1426)

In conclusion, headfirst water-entry incidents most often result in quadriplegia or serious injury to adult males, particularly those who dive into an in-ground pool at home. The same is the case for females, with the addition of the shallow-water variable; women frequently sustained quadriplegia after engaging in shallow-water dives into residential in-ground pools.

People who sued and went to a court of appeals after a serious injury from a headfirst entry into water often sustained their injuries in unsupervised environments that were not intended as places for headfirst entries. Minors were more likely to win in court (35%) than were adults (31%). Minors sustained the bulk of their injuries in in-ground pools at home while attempting run-and-plunge dives. Females had more success in court (40%) than did males (30.5%). The ratio of cases filed by plaintiffs whose headfirst entry resulted in either paraplegia or quadriplegia or severe injuries to cases that resulted in death (18:1) might suggest that people are suing to fund the cost of injuries, rehabilitation, and lost wages.

## Recommendations for Future Research

Future researchers should consider obtaining more definitive information on age; in this study we had to categorize age as simply adult or minor because of the lack of specific ages given in the court decisions. A qualitative study whereby researchers would conduct in-depth interviews with people who have dived into shallow water is warranted; this might expose specific reasons that people (in this study, most often females) are diving into shallow water. In addition, researchers should consider a

longitudinal study, sorting data by year, seeking to uncover patterns and changes over time. Finally, future researchers should contrast headfirst injury data with the results of court decisions for individual states, thereby uncovering legal precedent in specific areas.

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